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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,128	09/08/2003	Shinichiro Koga	03500.011436.1	8649

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NEW YORK, NY 10112

EXAMINER

VO, TUNG T

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/656,128

Applicant(s)

KOGA ET AL.

Examiner

Tung Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 25-28 and 32-35 is/are rejected.
- 7) ☒ Claim(s) 29-31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/651,348.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/08/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 25-27, and 32-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawasaki et al. (US 5,838,365).

Re claims 25 and 35, Sawasaki discloses an image processing apparatus (45 of fig. 45) comprising: a) a signal inputter (501 of fig. 45), arranged to input an image signal of a frame;

b) a detector (505 of fig. 45), arranged to detect an image change by comparing the inputted image signal with a reference image signal (fig. 7); and

c) a storage unit, arranged to update the reference image signal by storing the inputted image signal as the reference image signal on a frame basis when said detector detects an image change (col. 25, lines 34-37; S24 of fig. 46), and not to update the reference image signal when said detector detects that there is not an image change (S24, NO, of fig. 46).

Re claim 26, Sawasaki further discloses further comprising an outputter, arranged to externally output the image signal in units of frames, in accordance with an output from said detector (507 of fig. 45)

Re claim 27, Sawasaki further discloses wherein said outputter outputs the image signal to an external unit via a communication path (115 of fig. 45).

Claims 32-34, Sawasaki further discloses wherein said detector (505 of fig. 45) forms a differential image signal by performing differential processing on the image signal, and detects a frame change based on the differential image signal wherein said image processing apparatus is applied to a video conference system (col. 1, lines 10-23), wherein said image processing apparatus is applied to a monitoring system (col. 1, lines 10-23).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawasaki et al. (US 5,838,365) in view of Okazaki et al. (US 6,606,636).

Re claim 28, Sawasaki teaches wherein said detector (505 of fig 45) calculates the difference (correlation) of the frame image (fig. 7) except a pixel value difference between each pair of corresponding pixels using the image signal and the reference image signal, and, if a sum

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total of pixel value differences in an entire frame is larger than a predetermined threshold value, determines that a frame change has occurred as claimed.

However, Okazaki teaches a pixel value difference between each pair of corresponding pixels using the image signal and the reference image signal, and, if a sum total of pixel value differences in an entire frame is larger than a predetermined threshold value, determines that a frame change has occurred (figs. 3-5).

Therefore, taking the teachings of Sawasaki and Okazaki as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Okazaki in to the image processing apparatus of Sawasaki in order to accurately determine the change within the frame. Doing so would improve the reliability of the change detecting process.

Allowable Subject Matter

6. Claims 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The cited prior art does not particularly disclose said detector calculates a pixel value difference between each pair of corresponding pixels using the image signal and the reference image signal, determines, if a corresponding pixel value difference is larger than a first threshold value, that a pixel change has occurred, and determines, if a number of pixels having undergone changes in an entire frame is larger than a second threshold value, that a frame change has occurred as specified in claim 29; said detector divides the image signal and the reference image signal into a plurality of blocks, calculates a sum total of pixel value differences between

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corresponding pixels using the image signal and the reference image signal in units of blocks, determines, if the sum total is larger than a first threshold value, that a corresponding block has undergone a change, and determines, if a number of blocks having undergone changes in an entire frame is larger than a second threshold value, that a frame change has occurred as specified in claim 30; and said detector divides the image signal and the reference image signal into a plurality of blocks, calculates a pixel value difference between each pair of pixels corresponding to the image signal and the reference image signal, determines, if each pixel value difference is larger than a first threshold value and a corresponding pixel which has undergone changes in a block is larger than a second threshold value, that the block of the corresponding pixel has undergone a change, and determines, if a number of blocks having undergone changes in an entire frame is larger than a third threshold value, that a frame change has occurred as specified in claim 31.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Callahan et al. (US 5,664,029) discloses method of disregarding changes in data in a location of a data structure based upon changes in data in nearby locations.

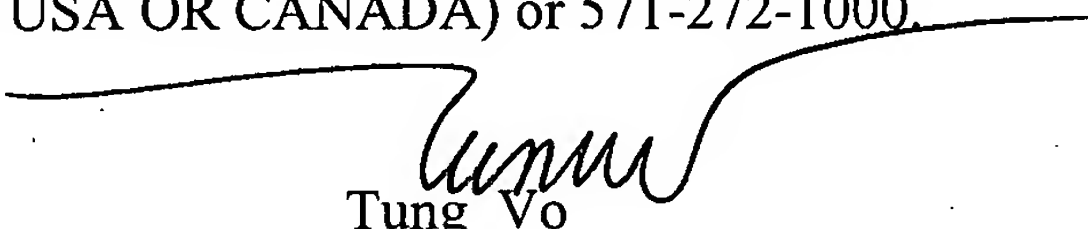
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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tung Vo
Primary Examiner
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